appressed silky pubescence and few-flowered peduncles. So many species of *Evolvulus* of northern South America extend into Central America and the West Indies that it is possible the species here described may be found in Panama or Central America.

HOMER D. HOUSE.

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REVIEWS

Scott on the Present Position of Palaeozoic Botany*

Band 1, Heft 1, of Progressus Rei Botanicae published by the International Association of Botanists under the editorial supervision of Dr. J. P. Lotsy promises to be of very considerable value, if one may judge from the initial instalment. Leaving it to others to characterize the merits of Strasburger's and of Flahault's contributions, I wish to direct attention to the very valuable summary by Scott of "The Present Position of Palaeozoic Botany."

Paleobotany has been to such a large extent divorced from botany in the past and so largely ignored by botanists that I am sure that this summary will be read with surprise by a goodly number who have heretofore looked upon paleobotany with somewhat of disdain as a science engaged in the more or less questionable occupation of describing fragments of prehistoric plants whose identification is more or less uncertain. Granting that identifications are oftentimes not all that might be desired, and it may be remarked parenthetically that this shortcoming is not the exclusive possession of those who deal with fossil plants, nevertheless the fact remains that the number of fossil plants in some orders, as for instance the Cycadales, far exceeds their living representatives; other orders are wholly unknown in the modern flora (Sphenophyllales, Cordiatales); while in still other groups the modern representatives are but mere remnants of once large and complex assemblages whose existence would not have been

*Scott, D. H. The Present Position of Palaeozoic Botany. Progressus Rei Botanicae 1 : 139–217. 1907.

dreamt of were it not for the study of fossil remains. I refer to the Equisetales and Lycopodiales. While not holding a brief for the study of paleobotany, the prediction is eminently true that in a few years' time it will be as much of an absurdity to pretend to discuss the broader questions of morphology, systematic botany, or geographical distribution without taking paleobotany into account as it is now for a zoölogist to discuss the morphology, classification, or geographical distribution of mammals without an intimate acquaintance with Tertiary vertebrate paleontology.

The limits and relative development of the various classes in the Paleozoic were so different from what we are familiar with in modern floras and the time involved was so enormous, that it is difficult properly to orient oneself; we forget that Paleozoic time was longer than all time since its close, and that it undoubtedly afforded opportunity for the evolution of structures and habits far beyond what we have been accustomed to imagine.

In the study of Paleozoic floras, discovery has trod upon the heels of discovery during the past few years so that the present summary of a scattered and special literature is not only timely, but coming as it does from the pen of one who is such a master workman in the ranks of investigators in this field, it possesses an added value and authority. After a brief introduction the various groups are taken up in a systematic order, commencing with the algae and ending with the Gymnospermae, the treatment being mainly morphological and evolutionary. Space forbids an extended notice. The work itself is succinctly condensed and should be on the work-table of every botanist. A few points may be merely enumerated.

The probable abundance of Carboniferous fungi and the total absence of authentic Bryophyta is noted, the latter fact somewhat puzzling to those who assign so great a theoretical importance to this sub-kingdom. Interest centers in the vascular plants and it is pointed out that their division into Pteridophyta and Spermatophyta ceases to be a natural one with the discovery of the Pteridospermatophyta. Thus these terms are likely to follow the Cryptogamia and Phanerogamia into the limbo of disuse before many years. Seed-like organs in two very different genera of

Paleozoic lycopods (*Lepidocarpon*, *Miadesmia*) would seem to indicate that a variety of quasispermatophytic Lycopodiales await future discovery. Considerable space is devoted to the Filicales and stress is laid upon the new viewpoint resulting from the recent discoveries which have so greatly restricted the Filicales, their position in the Carboniferous flora becoming subordinate instead of dominant. True ferns of the family Botryopterideae are, however, described in detail. It may be remarked that the present state of opinion is preëminently transitional and unsatisfactory and, as it seems to me, is destined to considerable future modification. The Pteridospermatophyta or fern-like seed plants are described in considerable detail and will more than repay a careful perusal. The Gymnospermae are treated with great briefness since there is little of novelty to record.

With these few hints at the rich gleanings which await the student, this very brief and inadequate notice is brought to a close.

EDWARD W. BERRY.

MARYLAND GEOLOGICAL SURVEY.

PROCEEDINGS OF THE CLUB

JANUARY 30, 1907

The second regular meeting for the year 1907 was called to order at the museum building of the New York Botanical Garden at 3:30 P. M., with Vice-president Underwood in the chair. Twenty-three persons were present.

A brief account of the reception given by the Club on December 26, 1906, and the minutes of the annual meeting, January 8, 1907, were read and approved by the Club.

The name of Miss Ruth Price, 19 East 48th Street, was presented for membership.

Under "unfinished business," the annual reports of the recording and the corresponding secretaries for 1906 were presented and accepted.

Resignations were received and accepted from the following persons: Mr. F. H. Blodgett, Baltimore, Md.; Mr. Charles L.